

To: Way, Steven[way.steven@epa.gov]
From: Rob Runkel
Sent: Wed 8/26/2015 2:59:55 PM
Subject: Re: second set of samples (fwd)
[al_diss.png](#)
[cd_diss.png](#)
[cu_diss.png](#)
[fe_diss.png](#)
[mn_diss.png](#)
[ni_diss.png](#)
[pb_diss.png](#)
[ph.png](#)
[zn_diss.png](#)

----- Forwarded message -----

Date: Tue, 18 Aug 2015 19:41:52 -0600 (MDT)
From: Rob Runkel <runkel@usgs.gov>
To: Steve Way <Way.Steven@epamail.epa.gov>, Dan Wall <Wall.Dan@epamail.epa.gov>, guy.kerry@epa.gov
Subject: Re: second set of samples (fwd)

Steve --

Plots to go along w/ the spreadsheet I sent earlier today. Looks like you have an issue w/ Cd, Cu, and possibly Pb. (all consistent w/ the data and analysis I sent you on Saturday). This currently isn't a big issue due to dilution from the upper animas and mineral (both flowing at about 100 cfs last week), but it may be in the future. I think you want bump the pH up to 6.5 (its currently 5) - so that you sorb more Cu, Cd, and Pb. The good news is Zn is OK as is.

guide to red dots:

first one - above Gold King
second one - below Gold King (above American Tunnel)
third one - below American Tunnel (above South Fork)
fourth - Cement Gage

Rob Runkel
Research Hydrologist
U.S. Geological Survey
runkel@usgs.gov
303.541.3013
<http://profile.usgs.gov/runkel>

On Tue, 18 Aug 2015, Rob Runkel wrote:

>
> All - here are the results for the samples I collected last Thursday. I'll
> make some plots comparing these concentrations to those we observed Oct

> 2012.
>
> sites sampled 8/13:
>
> CC03 Cement Creek above North Fork Cement Creek N37.89559 W107.64702
> CC18B Cement Creek above the American Tunnel and below the North Fork
> N37.89258 W107.64834
> CC20 Cement Creek above South Fork Cement Creek N37.88970 W107.65327
> CC48 Cement Creek near mouth, USGS gage #09358550
>
> pH at outlet of 4th treatment pond was 5.0 at 16:35 on 8/13; see spreadsheet
> for other details.
>
> -----
> Rob Runkel
> Research Hydrologist
> U.S. Geological Survey
> runkel@usgs.gov
> 303.541.3013
> <http://profile.usgs.gov/runkel>
> -----
>
>
> ----- Forwarded message -----
> Date: Tue, 18 Aug 2015 16:12:34 -0600
> From: "McCleskey, R. Blaine" <rblmccles@usgs.gov>
> To: Rob Runkel <rlrunkel@gmail.com>
> Cc: D Kirk Nordstrom <dkn@usgs.gov>, Katie Walton-Day <kwaltond@usgs.gov>
> Subject: Re: second set of samples
>
> Hi,
>
> Attached are the data for the second set of data. All the QAQC looks good.
>
> Blaine
>
> On Sun, Aug 16, 2015 at 12:34 PM, Rob Runkel <rlrunkel@gmail.com> wrote:
>
>
>> the second set is in my office - I didn't have the master key code, so I
>> left them there. The box underneath the samples is yours as well. I
>> won't
>> be in until monday afternoon - thanks
>>
>> -----
>> Rob Runkel
>> Research Hydrologist
>> U.S. Geological Survey
>> runkel@usgs.gov
>> 303.541.3013
>> <http://profile.usgs.gov/runkel>
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> --
> Blaine McCleskey, Ph.D.
> U.S. Geological Survey
> 3215 Marine St., Suite E-127
> Boulder, CO 80303
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